



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,228	06/11/2007	Marcel Adriaan Jansen	ACH-3018	2145
56744	7590	01/28/2010	EXAMINER	
Albemarle Netherlands B.V. Patent and Trademark Department 451 Florida Street Baton Rouge, LA 70801			LIAO, DIANA J	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			01/28/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/574,228	JANSEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	DIANA J. LIAO	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 October 2009.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 16-19 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 and 11-15 is/are rejected.
- 7) Claim(s) 10 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____ .	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Status of Application***

Applicant's amendment dated 10/28/09 has been received. In view of the amendments, claim objections to claims 4-9 and 11-15 have been withdrawn and are now treated on the merits. As necessitated by this amendment, a new ground of rejection is made on claims 4-9 and 11-15 and the claims from which they depend, claims 1 and 2.

### ***Claim Objections***

1. Claim 10 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on other multiple dependent claims and multiple dependency may only be done in the alternative. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 8 recites the limitation "the catalyst composition containing the acid". There is insufficient antecedent basis for this limitation in the claim since the

independent claim only mentions a catalyst being contacted with an acid and not necessarily containing it.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman, et al. (US 5,389,592).

Weissman '592 teaches a method for enhancing regenerated hydroprocessing catalysts. The active metals for these types of catalysts include those of Groups VIB and VIII, and most commonly Ni, Co, Mo, and W. (col 2, line 2-10) The process utilizes a boron containing compound as well as solvents, such as alcohols (equivalent to claimed organic additive). (claim 1) Alcohols are typically miscible in water and thus show great solubility. Alcohols have varying boiling points, including those of between

80-500°C. For example, isopropyl alcohol has a boiling point of 82.3°C. The boron containing compound may be boric acid (claim 6), thus teaching contacting the catalyst with an acid.

The crystalline fraction of the catalyst is not discussed in Weissman '592. However, it would have been obvious to one of ordinary skill in the art to perform reactivation strategies to any suitable catalysts, including either or both of crystalline or amorphous type catalysts.

Therefore, claims 1-3 are not found patentable over the prior art.

8. Claims 1, 2, 4-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shukis, et al. (US 6,239,054).

Shukis '054 teaches a process for regenerating a spent catalyst comprising a support by wetting the support with a chelating agent in a carrier liquid and then aging the wetted support before drying. (claim 1) Hydrotreating catalysts, which may benefit from this process, are usually a combination of Group VIB and Group VIII metals impregnated onto an alumina substrate. (col 1, lines 61-67) The process may be applied to the catalyst at any point during use and production after the alumina support is made and also can be used to improve activity during regeneration. (col 2, lines 49-62) Thus Shukis '054 fairly teaches the use of this process with fresh and spent catalysts.

Appropriate chelating agents include acetic acids and ethylene glycol (Table 4), and also citric acid. (Table 1) Ethylene glycol is miscible in water, contains two OH groups, and has a boiling point of about 197°C. Shukis '054 teaches that the amount of

chelating agent is not critical to obtaining the effect but the amount will affect the degree of the effect. Generally the chelating agent should be present in an amount of 0.01-1.0 grams of agent per gram of catalyst (col 5, lines 55-64), leading to a ratio of 1:100 to 1:1.

The crystalline fractions of the catalytic metals are not discussed. However, it would have been obvious to one of ordinary skill in the art to perform reactivation strategies to any suitable catalysts, including either or both of crystalline or amorphous type catalysts.

Regarding calcining the catalyst, it is well known in the art to calcine a catalyst before use, and thus it would have been obvious to calcine a fresh hydrotreating catalyst.

Regarding using both an additive and acid, since known agents in Shukis '054 for improving the activity of spent and existing catalysts include compounds that meet the requirements for acids and additives as in the instant claims, it would have been obvious to use a combination of two or more of these agents in conjunction. The use of all agents in Shukis '054 was at least found to increase surface area after an appropriate aging time. (col 8, lines 6-10)

Therefore, Shukis '054 is found to teach the treatment of a hydrotreating catalyst with an acid and an organic additive and claims 1, 2, 4-9 and 11-15 are not found patentable over the prior art.

***Response to Arguments***

9. Applicant's arguments filed 10/28/2009 have been fully considered but they are not persuasive.
10. Applicant argues that the teaching in Weissman '592 to use alcohols does not properly render the claimed additive unpatentable and that hindsight was used to select the alcohol noted above. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The note of an example alcohol that meets the additive criteria was merely to show that the overlap of the scope of the prior art and the instant claims render the claims unpatentable. A showing of unexpected results would have to be directly shown to differentiate the prior art process from the claimed process.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANA J. LIAO whose telephone number is (571)270-3592. The examiner can normally be reached on Monday - Friday 9:00am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ngoc-Yen M. Nguyen/  
Primary Examiner, Art Unit 1793

DJL